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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/497,993	02/04/2000	Bradley Paul Barber	AGERE3.0-064	8152
49472	7590	03/12/2007		
AGERE LERNER, DAVID et al. 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			EXAMINER TUGBANG, ANTHONY D	
			ART UNIT 3729	PAPER NUMBER
			MAIL DATE 03/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	<b>Application No.</b> 09/497,993	<b>Applicant(s)</b> BARBER ET AL.	
	<b>Examiner</b> A. Dexter Tugbang	<b>Art Unit</b> 3729	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 13 February 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
 b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
 (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
 (b) ☐ They raise the issue of new matter (see NOTE below);  
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

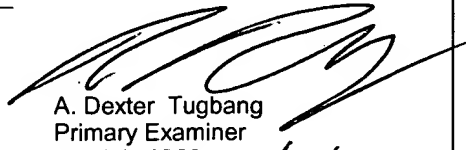
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
 5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
 6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
 7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
 The status of the claim(s) is (or will be) as follows:  
 Claim(s) allowed: \_\_\_\_\_.  
 Claim(s) objected to: \_\_\_\_\_.  
 Claim(s) rejected: \_\_\_\_\_.  
 Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Attachment.  
 12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
 13. ☐ Other: \_\_\_\_\_.

  
 A. Dexter Tugbang  
 Primary Examiner  
 Art Unit: 3729  
3/7/07

***Request for Reconsideration***

The applicant(s) arguments filed on February 13, 2007 have been fully considered but they are not persuasive.

The applicant(s) argue that the prior does not teach “removing...is patterned” (last 4 lines of Claim 1 with similar limitations at the last 4 lines of Claim 13).

The examiner most respectfully disagrees.

In regards to the merits of Fujii et al, what piezoelectric material is involved in signal transmission and what piezoelectric material is not involved in signal transmission is clear to one of ordinary skill in the art. Signal transmission has to do with how the device operates or how current is conducted from the electrodes through the piezoelectric material in the final structure. The final structure of the device of Fujii is shown in Figure 2 (bottom figure). Look at the difference between what piezoelectric material 103 is shown in Figure 2 (second from bottom) and what is shown in the final structure (bottom figure). The piezoelectric material removed (in the sequence of the Figure 2 from top to bottom) cannot possibly be involved in signal transmission (e.g. operation of the device) because it is simply not there. Moreover, the operation of the device, particularly the piezoelectric material between the electrodes (read as the “un-etched regions” of 103) has “lateral propagation” and “energy in lateral modes” because of the deflection of the piezoelectric material that occurs when an electrical current is applied to the piezoelectric material. One of ordinary skill in the art of making piezoelectric devices would understand this based on the definition of piezoelectric device making, which is shown in the Manual of Classification as:

Class 29, Subclass 25.35

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...Miscellaneous process or apparatus for manufacturing a piezoelectric device or piezoelectric crystal, which is not classifiable in a specific class relating to the manufacture of such an article.

(1) Note. *A piezoelectric device under this definition is a device which contains a material which exhibits an electrostatic polarization when subjected to mechanical stress or which exhibits a mechanical stress, tending to produce a deflection, when subjected to electric stress, including provision in combination with means to utilize the piezoelectric property of said material.* The material may be crystalline or may not be so. The vast majority of piezoelectric substances are crystalline, but a few substances which are not obviously crystalline, such as some barium titanate ceramics and some wax-resin electrets (the electrostatic analogue of the permanent magnet), exhibit piezoelectric properties. Since, in theory, piezoelectricity is attributed to certain types of anisotropy in the material, those piezoelectric materials which are not obviously crystalline may be regarded as having a quasi-crystalline structure and the expression piezoelectric crystal is adopted, for convenience of expression, as being generic to both types of material in the shaped (as distinguished from the bulk) state where the shape (e.g., plate, AT cut) is disclosed as being significant to the piezoelectric property of the material. In summary: Piezoelectric material = material in bulk. Piezoelectric crystal = material shaped for piezo-electricity. Piezoelectric device = piezoelectric material or crystal + utilization means (e.g., electrodes holder).

So based on the operation of the piezoelectric device and an understanding of what function a piezoelectric material has, the deflection (e.g. propagation or energy in lateral modes) is limited by the amount of material present during operation, i.e. signal transmission. In reviewing the piezoelectric material that is present in the final structure (bottom of Fig. 2) and what piezoelectric material is not present in the final structure (2<sup>nd</sup> from bottom of Fig. 2), the limiting of lateral propagation losses and propagation of energy in the lateral modes (e.g. deflection of the piezoelectric material) is inherently taught by Fujii et al.

Alternatively, EerNisse shows that removal of piezoelectric material limits and controls propagation losses or propagation of energy in lateral modes to achieve at least a resonant frequency. Since both Fujii and EerNisse solve the same problems associated with removing piezoelectric material, the combination of Fujii and EerNisse would be obvious to one of ordinary skill in the art.

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Accordingly, the rejections applied the Final Rejection (mailed on November 20, 2006)  
are maintained.